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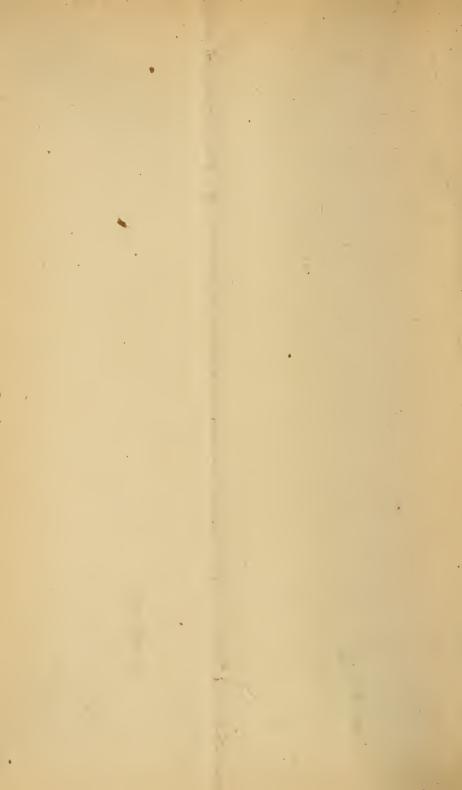
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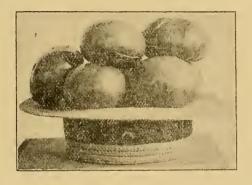
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# BULLETIN 39

West Virginia Agricultural Experiment Station. MORGANTOWN, W. VA.

# VEGETABLES.



Buckeye State.

By F. WM. RANE.

January, 1895.



CHARLESTON, W. VA. Moses W. Donnally, Public Printer.

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# HORTICULTURAL DEPARTMENT.

# Bulletin No. 39. Vegetables.

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# VARIETY TESTS OF VEGETABLES.

By F. Wm. RANE, M. S.

Olericulture, or yegetable gardening, is progressive, and to keep abreast of the times some little attention must be paid to it. During the season of 1894, the Horticultural Department entered upon

this line of work for the first time.

The testing of the seeds of new varieties which seedsmen and private individuals are continually offering in their attempts to find something better than we already have, is an important work, and one that requires labor and expense as well. In itself it is a very simple matter, but the average farmer and gardener cannot afford to spend his time and money on an extensive test.

To aid the gardener, then, the Station undertakes this work. Heretofore our experiments have been conducted on a limited scale, owing to lack of available ground. We have tested those seeds which we have been requested to test and have reported to the

sender, but have not published the results.

Our purpose is to eliminate the undesirable new varieties, and to establish the worth of the promising ones. This being our first year, we selected many of the older and more familiar varieties than we shall hereafter, in order that every one might be able to compare those grown by themselves with the new introductions. The coming year we will retain only those showing superior points for further trial, to which we will add this year's introductions.

The Trial Grounds.

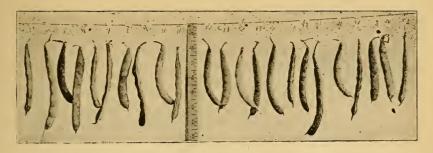
January, 1894, the Director turned the land formerly used by the late Agriculturist, over to this Department. It contains about three acres, is located just across the street from the Station building, and extends east and west, sloping from north-east to southwest. The soil is a reddish clay loam and has been used for raising

corn, sorghum and tobacco, for the past few years.

After it was placed in our charge it was plowed, limed heavily, manured, and again plowed, harrowed, and gone over with the garden rake, to put it in order. Although a great amount of labor was spent on the land, it is needless to say that it did not take the place of a fertile garden, and all who read this bulletin must, therefore, take this fact into account. Not only was the soil new for gardening purposes, but we also had an extremely dry season. We know that our yield is below the average in quantity, but it is sufficient to establish the comparative merits or demerits of the various varieties of vegetables, which was our main object.

The following data were mainly taken under personal direction by Messrs. J. M. Johnson and A. J. Ireland, two promising young

men in the Horticultural Department of our University.



Cut 2 .- Bush Beans,

#### Bush Beans.

There are numerous varieties of bush beans, and the variety to be selected depends upon the use you desire to make of them. They vary as to earliness, productiveness, color, size and quality. The bean can be grown on almost any soil but revels best in those comparatively light and well-drained. Never plant too early, as they are liable to be injured by the cool damp weather in early The time recommended as safest is at corn planting, and spring. by planting every two or three weeks from this time until the end of July, a succession may be had throughout the year. The varieties named in the following table were planted in rows, three and one-half feet apart, each variety occupying seventeen feet in the row. The seed was sown on May 8th. The pods were picked and weighed as they ripened; also other data taken. In cut 2 are found representative specimens.

_								
Number	VARIETY.	Seedsman.	Date of Edible Ma- turity.	No. Plants matured	Height.	Diameter of Head.	Total Yield.	Av. number keans per pod.
1 2 3 3 4 5 6 6 7 8 9 10 11 12 13 31 32 33 38 39 40	Pink Eye Wax. Golden Eyed Wax. White Valentine Bush. White Cranberry Bush. New Stringless Green Pod. Speckled Wax. Eyed Golden Wax. Bush Bean Round Yellow. Bush Bean Sion House. Thornburn's Ex. Ey. Refugee.	Landreth Draer Barteldes Barteldes Dreer Dreer Dreer	July 6 6 6 7 13 17 10 21 31 10 31 10 July 23	56 66 63 30 68 19 30 45 33 36 51 54 47 52 54	in 13 15 13 14 14 14 13 11 13 11 13 16 16 16 18 14 16 18	in 13 14 12 12 11 16 11 13 10 14 13 20 15 12 14 14 23 14	10 5.7 11.5 8.3 9.9 3.1 19. 3.5 4.2 5.2 6.7 8.3 8.6 9.1 8.3 7.5 7.9	55555555555555555555555555555555555555
42 43	Thornburn's Ex. Ey. Market Vick's Prolific Pickler. Wisconsin Tree Jackson Wonder.	Vick Sons J.A. Everitt	1 July 16	19 41 47 39	12 21 14 12	17 24 20 14	8.4 8.6 9.8 12.3	4 4 7

#### Lima Beans.

The *Dwarf Limas* did not ripen well, and the percentage of germination was poor with some varieties. We give the following table, (see below) however, that our gardeners may compare them with their own.

_										
Number.	VARIETY.	Seedsman.	Date of Edible Maturity.		Height inches.	Diameter of Head Inches.	Total Yie d Pounds.	A verage No. beans per pod	Av. Weight per Plant, Ounces.	Remarks.
								_		
23	Burpee's Bush Lima	U. S. Dept	Aug. 11	34	13	12	7.3	5	3.36	About 1 quart. Not matured.
26	Dreer's Bush Lima	Johnson &								Not matured.
	Dicer o Basic Billianni	Stokes	Aug. 16	6	10	18	4.5	4	12.00	Layon ground.
~	T I I III J D	Taharan G								3 quarts not
27	Jackson's Wonder Dur- fee Lima		Aug. 11	29	13	18	11.6	5	6.40	matured. Lay on ground.
28	Bush Lima	Burpee	Aug. 11		13 10	18	11.6 4.7	5 5	4.56	on groupu.
34	Henderson's Dwarf Li-			1	اريا		ĺ.,	_		1
	ma	N. B. G. Co	Aug. 11	36	14 10	13 15	8.4			Begn'g to run
35	Kumerle Dwarf Lima	N. B. G. Co.,	Oct. 8	2	10	19	. 9	4	1.20	Germinated poorly.
36	Buckbee's Dwarf Lima.	N. B. G. Co	Aug. 11	11	14	13	3.5	4	4.96	Three quarts.
	24022000 2									Not matured
				10		10		-		October 9.
37	Dreer's Dwarf Lima	N. B. G. Co	Aug. 25	10	13	12	3.4	5	5.44	

The *Pole Limas* run more evenly. The column marked "Average per Hill" will give a fair, comparative yield for our soil and conditions.

Number.	VARIETY.	Seedsman.	Date of Ed - ble Maturity.	No. Hills Ma- ture .	Total Yield in Pounds.	Average per Hill.	Average No. Beans:per Pod.
29 30	White Dutch or Case Knife	Burpee	Aug. 2 Aug. 16 July 23 Aug. 13	10 21 10 11	10 27. 4 17. 3 12. 7	Lbs. Ozs. 1 0 1 5½ 1 11 1 3-5	5 6 5 4

## Pole Beans.

The Pole Beans must be given more room than the dwarf. They are also tenderer and usually planted a fortnight later. Set the poles, when planting, so as not to disturb the young plants when they germinate. The varieties in the test were all planted May 8th. There were more hills of some varieties than of others, but in the column marked "Average per Hill," the comparisons can be easily seen.

Number.	VARIETY.	SEEDSMAN.	Date of Edible Matu-		Number hills Matured.	Total Yield In Pounds.	lbs.	Average Per Hill	Average No Beans Per Pod.
16 17 20 21 22	Tall German Wax Caroline Giant Wax Southern Prolific Horticultural Fat Horse Kentucky Wonder	Landreth Landreth Landreth Landreth	August " July	16 11 2 3 2 16 16		1.5 10.8 12.5 7 9 4.4 21.8 46.1	1	2 3-10 1 3-5 13 8 7 11/6 51/2	3 4 5 7 5 6 8

#### Beets.

The varieties under test are mainly of the turnip-rooted forms, for the reason that these are in the greatest demand in the markets. There are many very valuable varieties at present. The best one to be grown will depend upon the fancy of the market as to color, size, shape, etc. The ground cannot be too rich nor too thoroughly pulverized. The roots generally bring the best prices early in the season, and it often happens that it pays better to harvest the crop when half grown, than to wait until fully matured. Like many other vegetables, they may be had continually by sowing in succession from two to three weeks apart. Always press the soil closely to the seed when planted, or in a dry time the seed will not germinate. The ground occupied by the early crop is always used for a second one after they are marketed. The majority of gardeners sow more seed than is necessary, and then thin out, leaving the desired number of plants to mature, using those thinned out as a substitute for spinach.

-								
Number.	VARIETY.	Seedsman.	Total Yield	Weight, Ibs.	Av. Wt., cz.	Av. Dism. ln.	Character of Form,	Color of Skin.
2 3 4 5 5 6 7 16 17 18 19 20 21 22 23 24 25 26	Dewing's Red Turnip Eclipse Egyptian Ex. Ey. Turnip Bassano Ex. Ey. Turnip E'y Blood Red Turnip E'y Blood Red Turnip Philadelphia Ey. Turnip New Danish Imp Sugar Columbia Be t Derigo Blood Turnip Burpre's Imp. Blood Turnip Imp. Long Uk Blood Lentz Crosby's Ex. ptian Crimson (hief Turnip Landreth's Very Early Lentz Bloomsdale H'f Round Bastian	Burpee	23 18 33 35 28 19 23 34	10.3 1.5 19 3 2 9. 3. 11.7 18. 5 1.8 10.1 11.8 13.8 9.5 14.	1.60 4.56 1.60 1.12 3.20 7.20 4.96 4.80 1.28 8.48 1.60 5.2× 5.28 8.00 2.56 6.40 4.80	3 2 4 2 3 3 2 2 2 3 3 1 3 2 2 3 2 2 3 2 3 2 2 3 3 2 3 3 2 3	Hf. round	Pk. Red. Red. Dk. Red. bt. Ked. Dk. Red. """ Pale Red. Red. Bt. Red.

# Cauliflower.

Twelve varieties were selected for this test. Cauliflower demands a rich soil, in order to produce large heads. The plants were started in the greenhouse and after hardening off in the cold frame were transplanted out of doors. Twenty-five plants of each variety were grown. The best varieties as regards earliness and productiveness were the Early Dwarf Erfurt, H. A. March, and the Alabaster, Johnson & Stokes. These two ripened at the same time and were equally the largest heads. Early Snowball, Dreer, and Model, N. B. G. & Co., together with Early Perfection, March, were second best. The same cultivation that is given to cabbage will answer for cauliflower.



# First Early Cabbage.

I wenty-two varieties were used in the test of early cabbage. The plants, numbering twenty-five each variety, were transplanted into the garden April 24th. When the earlier varieties were being harvested there was no competition other than with those shipped from Baltimore. We believe early cabbage could be made to pay very well, should gardeners concentrate their attention on maturing it a few days earlier than at present. People are always willing to pay more for those home-grown and fresh from the garden.

Select a well-drained and comparatively light soil and give it plenty of manure, at the rate of seventy-five tons to the acre, if possible. The soil should be thoroughly prepared, and to a depth of at least ten inches. Many plow the ground in the fall, which, subjecting it to the freezing and thawing of winter, pulverizes, kills insects, and leaves it in excellent condition to begin with in early Spring. The ground occupied by this crop can be used for a succeeding one, immediately after harvesting. Where the land is very valuable, many also grow radishes, spinach or lettuce between the rows, and by so doing, make these catch crops pay for the manure used. Cuts 3, 4 and 5 show the characteristic forms and comparative sizes of each variety, by a single specimen selected as a representative one. The numbers refer to the same number found in the accompanying table opposite its name.



12 10 19 72 Cut 4.—First Early Cabbage.

9 2

-								
vumber.	, VARIETY.	Seedsman.	Date of Edible Maturity.		Per Cent. If aded.	Av. Diam., in.	Av. Weight.	Character of form,
23 44 55 66 77 88 99 10 11 12 13 14 15 16 18 19 20 21	EX. Jersey Wakefield Extra Early Express. Farly Erfurt Ey. J. rsey Wakefield. Feld-r Kraut Charleston Wakefield Early York. Buckbee's New Green Landreth's Large York. Oxbeart (French)	Landre h Landreth Landreth Landreth Landreth Landreth Landreth Landreth Landreth Burpee Burpee Burpee Dunkirk Henderson Rerry Burkirk Henderson H A. March H A. March	June July June July June July June July June July	10 25 28 21 28 25 25 25 28 25 28 28 28 28 28 28 28 28 28 28 28 28 28	72 68 44 80 80 80 88 78 84 56 53 54 58 68 82 96 96	5 5½ 5 ½ 5 ½ 5 ½ 4 1-\$ 4 7-10 4 2 5 3½ 4 2-13 4½ 4 3-10 5 4	I — 6 2-5 I — 14 2 5 I — 5 2-5 I — 6 2-5 I — 6 2-5 I — 8 1—2 2-7 I — 8 1—1 3-5 I — 4 4 5 I — 0 1—6 2-5 I — 6 2 5 I — 6 2 5	See Photograph Cuts 3, 4 and 5.



16 14 11 8 5
Cut 5.—First Early Cabbage.

# Second Early Cabbage.

Of the Second Early Cabbage eighteen varieties were used. All these did fairly well, considering the dry weather. All Seasons, N. B. G. & Co., and Succession, Henderson, produced heads averaging exactly the same, and were ready for market at the same date. The All Seasons, however, produced a slightly greater percentage of matured heads. Following these, although not as large, come Early Dwarf Flat Dutch, Ferry, and Bloomsdale Early Market, Landreth.

# Late Cabbage.

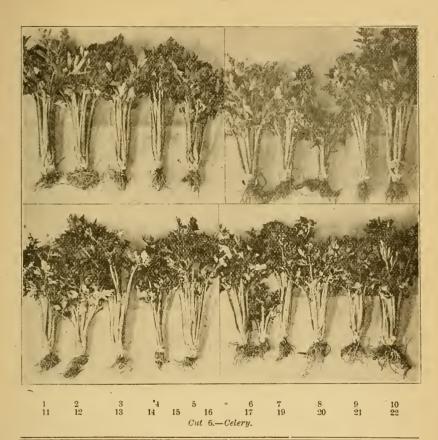
The late varieties of cabbage were not up to the usual standard. Twenty-three varieties were used. The variety averaging the best from all standpoints was the Early Deep Head, Livingston. Why this is called early we do not know. It makes a solid, oval head. Christmas King, Buckbee, is a close competitor and resembles the former very much. Next to these, although not as good, come Danish Round Winter, Vick's Sons, Sure Head, Burpee, and Autumn King, Henderson. The last three were all on a par.

# Celery.

This is a vegetable that should be found in every garden. At present nearly all our small towns are furnished by importation. Celery is not difficult to grow; the main thing is to select a comparatively level spot in the garden and to enrich it with well-rotted manure. The plants are generally started from seed in trays or a small bed made for that purpose, and then transplanted into rows in the garden, about six inches apart. In order to make the plants stocky the tops are clipped back when young. It is always desirable to have the soil as moist as possible. When the plants are from ten to twelve inches high, they can be blanched for use; this is accomplished by banking them with loose soil and continuing to do so as the plants grow. The Golden Self-Blanching is a variety which, as its name implies, has a tendency to blanch itself, and for the averge garden, for home use, although not as large as others, is one of the best.

For the past season the test varieties were very good. Cut 6 shows a single characteristic specimen of each of the varieties. The number in the table below refers to its representation in the cut. The plants are average specimens, and the photograph shows

their exact condition as they came from the beds.



Number.	VARIETY.	Seedaman.	No. Stalks.	Height, in.	Weight, lbs.	Av. Weight.	Color.
34 55 60 77 88 99 10 11 12 13 14 15 16 17 19 20 21	Boston Market. Golden Dwarf. Half Dwarf. Large White. Sandringham Dwarf White. Paris Golden Yellow. New White Plume Dwarf. Golden Self-Blanching. White Plume. New Giant Pascal New Rose. New Pink Plume New Rose. Giant Smooth Prague Celeriac. Perle le Grand. New Pere le Grand. Dwarf Celery. Pern Leafed. Golden Self-Blanching. Kalamazoo. Hartwell Perfection.	Landreth. Landreth Landreth Landreth Landreth Landreth Landreth Dunkirk Vick Sons. Vick Sons. Vick Sons. Vick Sons. Vick Sons. Lenderson Henderson Livingston's Sons. Johnson and Stokes. Station J. L. Childs. J. L. Childs. N. B G. Co.	20 20 20 20 20 20 20 20 20 20 20 20 20 2	24 18 12 26 28 18 11 30 18 24 18 9 20 16	22. 3 23 22. 4 34. 4 17. 5 11. 2 33. 32. 8 18. 5 5. 5 12. 5 28. 19. 5 7. 5 17. 2 18. 2	-15 -7 1-5 1-13 -9 4-5 1-6 -15 7-10 -5 4-5 -10 3-10 -13 4-5 -14½	White.

## Cucumbers.

This vegetable is so commonly grown that little need be said about it other than to name some of the best varieties. The greatest pest we have to contend with in raising the cucumber is the striped beetle. We were able to keep these insects in check by the use of sufficient tobacco dust, which, when dusted upon the young plants, repels them. After the plants get a fair start they will take care of themselves. Twenty-one varieties were grown. For general use the White Wonder, Burpee, is one of the best. The plants were very strong as well as productive. The fruit ran very evenly in color, shape and size. The White Spine, Landreth, was good for the season, as was the same variety from other seedsmen. Meaux Green Pickling, Burpee, new variety; vines very thrifty; fruit very large, July 23rd to September 20th; promising. Long Green, Ferry, is one of the largest late varieties. The earliest, although not as good otherwise, was the Early Cluster, Landreth.

# Egg Plant.

Eight varieties were grown. Many people in West Virginia have never tasted this vegetable, let alone growing it. The Egg Plant is easily grown and a few plants, if in rich soil, will produce enough eggs for a family. They must not be started too early, as they are natives of the tropics, and therefore require rather warm weather. The fruit is fit for use from the time it is the size of a pear until it is fully grown. It is not as good when it indicates an appearance of ripening. The New York Improved Large Purple and the Black Pekin are two of the best varieties, and are offered by most seedsmen.

#### Kale.

Five varieties were used in this test, and in cut 7 is represented a characteristic leaf of the following varieties: (1) Scotch Curled, (2) Dwarf Curled Scotch, (3) Dwarf German Greens, (4) Bloomsdale's Extra Doubled Curved, (5) German Dwarf (Purple), (6) Dwarf Curled German. For rank growers, numbers 1, 2 and 5 are preferable; but for dwarf and finely crinkled leaves, numbers, 3, 4 and 6. Culture, similar to that of cabbage. It is used for greens.



Cut 7.-Kale.

#### Kohl-Rabi.

Three varieties of this vegetable were grown in our trial grounds mainly for the purpose of giving visitors an opportunity to see it. It is not in general use and the sale is very limited. It is sometimes called the turnip-rooted cabbage from resemblance to both the cabbage and turnip. If allowed to get old it becomes stringy and worthless.

#### Lettuce.

Forty-nine varieties of lettuce have been tested, both in the garden and greenhouse. Of these we prefer the *Grand Rapids*, *Black-Seeded Simpson*, *Hanson* and *Boston Curled* as the best of the open-headed, crinkly varieties. Of the heading varieties, *Frankfort Head* and *Always Ready* were of the best.

The preferable way to grow all kinds of lettuce is to sow the seed thickly and then transplant about ten to twelve inches apart

in the row. Beautiful, large heads are thus produced.

Wheeler's Tom Thumb, Burpee, is a variety well named, for it takes but little space in the garden. It is small, forms a very hard, compact head, can be planted close together and matures very early. We also forced it in the greenhouse last season with very good results.

#### Musk Melon.

best satisfaction were Extra Early White, Johnson & Stokes, this being small and somewhat flattened on the ends, good quality and quite early; Banquet, Barteldes, good size, early, ripening with Extra Early, comparatively round, netted, thick yellow meat, small seed cavity, full of seed. Irondequoit, Burpee, perfectly smooth, medium to large, white when green, yellowish when ripe, deep yellow flesh, good flavor, September 1st. Jenny Lind, Landreth, early, small to medium size, flattened at the poles, good quality. New Tip Top, Livingston, good size, white netted, yellowish when ripe, productive; the only objection is that it cracks in the sections when ripe, flesh yellow and sweet, September 10th. Extra Early Hackensack, Landreth, medium size, very productive, heavily netted, flesh green, juicy, rich, September 2nd.

Two other varieties possessing merit are the Jersey Belle and

Two other varieties possessing merit are the Jersey Belle and Miller Cream, Johnson & Stokes. These varieties were not in our test, but we have seen them growing and gardeners pronounce

them among the best.



Cut 8 .- Ordinary and New Culture of Onions.

## Onions.

Thirty-five varieties were sown for this test. The season, however, was very dry and no trustworthy results were secured other than with those transplanted. The culture of the onion is ordinarily to sow as early in the Spring as practicable in rich, light soil, in drills about fifteen inches apart, and when the plants are up, thin to three or four inches. Hoe frequently to keep down the weeds. During the past two seasons we found that raising onions with ordinary culture on high land was a failure. The dry season caught them before they were sufficiently grown to withstand it.

The new method of onion culture is to sow the seed early in the green house or hot bed, and then to transplant them into the open ground, three or four inches apart, and not too deep. The points claimed for this are that it invariably increases the yield, the onions are larger and more uniform in size, and the extra labor involved in transplanting is offset by the saving of labor in weed-

ing.

Cut 8 represents twelve specimens of the best onions of two varieties, the *Prizetaker*, Barteldes, and *Early Red Globe*, Livingston, treated according to each of the above methods of culture. Number 31 represents twelve of the *Prizetaker* grown according to the new culture; while the small pile to the left represents the best twelve of the same variety under ordinary culture, the seed being sown at the same time that the former were transplanted and coming from the same package. Number 27 represents the *Early Red Globe* under precisely the same conditions as the above.

The following conclusion, therefore, can be drawn:

Onions may be grown on high ground in a dry season by the new culture, while under the ordinary culture, it would be a complete loss of seed, time, money and use of land.

#### Peas.

The following varieties were planted April 21st, in rows five feet apart. They were trained up on a two and oue-half foot poultry wire trellis. One hundred vines of each variety were taken as a basis of comparison. The yield, as heretofore given with other vegetables, is on a scale of 0 to 10.

CULTURE—For first early crop sow as early as the ground can be worked, and at intervals of two weeks for succession. Sow in rows two inches deep and from three to four feet apart, according to the variety used and the strength of soil. Extra early varieties

sown in August often bring a profitable crop by fall.

Number.	VARIETY.	SEEDMAN.	Per Cent of Germination	Height of Vines.	No. Days to Edible Matu-	Average No. Peas Per Pod.	Yields Seale 0-10, 100 Vines.
4 5 5 6 6 7 7 8 9 9 100 111 122 144 15 16 17 18 19 21 22 26 26 27 28 30 31	Premium Gem McLean's Advancer. Pr'de of the Market. McLean's Little Gem Telephone D *f. Blue Imperial champion of Ragland Days K'y Summer Irish Lg. Wht. Marrowfat. The Charmer Vick's King of the Dwarf General Grant Buckbee's Lightning Express. D *er *s Eureaa William Hurst Renown The Cho Heroiue. Queen ivingston's First in Market Melting Sugar Prince of Wales	Dreer Burpee. Burpee. Burpee. H-nderson. Livingston U.S. Dept. N. B. G. Co.	50 95 85 87 50 63 37 25 50 60 33% 100 100 62 55 74 76 76 76 76 76 76 76 76 76 76 76 87	in. 4 20 20 23 23 24 24 22 25 21 29 29 1 21 28 40 40 14 35 33 16 24 24 24 25 35 36 36	59 58 58 62 67 62 62 62 59 69 69 69 69 69 65 64 65 67 67 67 67 67 67 68 69 69 69 69 69 69 69 69 69 69 69 69 69	345566554555766644465874	77779108810988998889977788977788887
32 33 35 36	Ex Ey. Summit N. B. G. Co's Sapphire Sapphire Hero Ey Green Marrow	N. B. G. Co	*100 100 50 90	24 24 20 16	57 57 64 46		7 8

# Peppers.

Nine varieties were used. The cultivation and handling of these plants are precisely similar to that of the Egg Plant, mentioned elsewhere. The only addition to the old Bull Nose type worthy of mention is the *Giant Yellow King*, Livingston. This is, regardless of color, identical with the *Ruby King*. Its being yellow,

however, makes it a new addition to our list.

All of the Bull Nose types of peppers were affected by a *Macrosporium* disease, more commonly known as black mould. The fruit began first to decay at the tip, which gradually worked toward the stem end until the whole was worthless. It is thought that perhaps the Bordeaux mixture will keep it in check; the first appearance is somewhat similar to that of the *Macrosporium* of the tomato.

# Radishes.

The Radish is especially desired in early Spring. They are easily grown, mature in a short time, and can be used as a catch crop at any place in the garden. They are often planted between rows of beets, cabbage, cauliflower, etc., and are marketed and sold before these crops demand the intervening space. By sowing at intervals of two weeks apart, they may be had fresh for the table or market, throughout the growing season. The best variety for one gardener may not be the best for another, as the choice of color, form, size, etc., depends upon the consumer; the red, however, appears to be the more popular color. The accompanying table shows their comparative merits. Each variety was given a continuous row of eighteen feet. The seed was planted on April 27th.

_									
Number	VARIETY.	Seadsman.	Date of Fdtble Maturity.	Character of Forms.	Color of skin.	Color of Flesh.	Quality. Average diameter.	Average Weight	Per ct. sound June 8.
6 6 7 8 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	Go den Globe Ey Deep Scarlet Turnip Rooted Ey Red Scarlet Rooted. Ex White Turnip New Ey Short Leafed Short Topper Eys't White. New Crystal Forcing. New Rapid Forcing. Golden Dresden. French Breakfast New Imp. Freich Breakfast. Ewrliest Scarlet Button White Box	Landreths, Burpee	222 222 223 244 252 252 252 252 252 253 254 254 255 255 257 257 257 257 257 257 257 257	Round Conical Conical Turnip Turnip Halflong Turnip Conical Halflong Turnip Round Halflong	Red Red D'k red White White Russett D'k red D'k red D'k red D'k red D'k red White Real Red Red Red Red	Pink White	91.42 91.50 101.42 72.33 72.17 61.33 91.50 91.67 81.16 71.42 61.50 91.08 91.08 101.00 91.53 71.42 61.50 91.42	1.33 1.33 1.60 6.40 4.40 1.60 1.33 .80 1.06 1.12 1.60 1.16 1.16 1.16 1.16 1.16 1.16 1.16	35 50 30 90 100 95 40 25 75 14 75 100 8 60 70 20 90 95

# Salsify.

Four varieties were used; all of which were of about equal value. This vegetable is coming more and more into use, and every one should give it a trial. It is easily grown, which fact, we feel, is not generally known. The seed is sown in early Spring in drills. The plants need thinning out, should they come up thick. They are not hurt by frost, and can remain in the soil all Winter if desired, and then be dug out in Spring. Some dig them late in the Fall and store them in the cellar, or in a trench outside, to be used at will throughout the season. It is sometimes called the Oyster Plant, from its resemblance in flavor to that of the Oyster.

# Summer Squash.

The squash is comparatively a troublesome vegetable to raise on account of its numerous insect enemies. The varieties named in the table were badly infested, which, together with the dry summer, materially lessened the yield. We give the following table, which will indicate the period of ripening, character of form, color of skin, etc. The seed was sown on May 18th. With vegetables that are hard to grow, such as the Summer Squash, this is the time when it pays to take pains with it, on account of the demand and better prices.

Number.	VARIETY.	Seedsman.	Date of Maturity.	Per Cent. of Ma'urity.	No. of Fruits.	Av. Weight, 18s.	Av. Diam., inch.	Character of Form.	Color of Skin.
7	Ex. Ey. Bush	Landreth	July 30	100	17	1.9	8	Knotty, saucer	White.
8	Ey. White Bush	Landreth	July 27	90	16	1.6	71/2	shape.  Knotty, saucer   shape.	White.
11	Long. Green Summer Crook-neck Landreth's Wht Turban Golden Summer Crook-	Landreth	Aug. 22 Sept. 20	50 100	15 3	2.0 1.5		Long crook-	White.
14 15	neck. Cocozelie. Silver Custard.	Landreth	Aug. 22 Aug. 1	100	3 10	4.7	31/2	neck. Long. Round ridged	Green. White.
17	Hendersou's Delicata I-land Prize The Der Wing Squash	Johnson & Stokes.	Aug. 16	40	3	1.7	$\frac{3\frac{1}{2}}{4}$ $\frac{3\frac{1}{2}}{3\frac{1}{2}}$		Green. Yellow. White.

#### Sweet Corn.

Each variety occupied a row seventy-five feet in length and received ordinary field cultivation. The seed was sown on April 28th. As the table will show, the seed in nearly all eases was deficient in percentage of germination, and the season was so extremely unfavorable for those that did germinate that our gardeners were unable to furnish sufficient sweet corn for Morgantown market. In the column marked "Yield," the scale is 0 to 10; 10 representing the best, 9 good, 8 fair, 7 and below, poor.

Number.	VARIETY.	Seedsman.	Date o Edible Maturity.	Per Cent. of Germination.	Per Cent. of Maturity.	Height of stalk Inches.	Average Length Ears, Inches.	Average Weight Ears, Ounces.	Yield Scale, 0-10.
4 5 6 7 14 15 16 17 18 19 20 21 22 23	Early Crosby Sugar. Extra Early Concord Sugar. Asylum Sugar. Landreth's Sugar. Evergreen Sweet Corn Late Mammoth Sugar Early Mammoth Sugar Early Mammoth Sugar Extra Early Adams Etrly Landreth Market. Extra Early Minuesota Sugar Extra Early Naragansett Sugar. Buckbee's "Best of All" Zig Zag Evergreen Early Ford Hook Livingston's New Silver Cane. Zig Zag Evergreen Red Cob Corn Dungan's Sweet Corn	Landreth Buckbee N. B. G. Co N. B. G. Co Burpee Livingston U, S. Dept. Station	Aug. 13 Aug. 2 Aug. 2 Aug. 2 July 14 July 16 July 15 July 25 July 25 July 25 Aug. 17 July 14 Aug. 13 Aug. 2 Aug. 2	25 35 45 36 55 69 35 41 40 49 41 36 66 98	50 65 100 70 71 100 86 95 35 39 43 58 72 79 95 100 37	50 60 60 62 65 72 60 46 58 60 46 52 61	6½ 8 7	8 6.4 4.8 6.4 6.4 9.6 4.8 12.8	7 6 7 8 8 5 6 6 7 7 9

### Tomatoes.

The seed was sown in the forcing house, March 12th, in ordinary trays, and transplanted and placed in cold frames before going into the trial grounds on May 8th. Ten plants were taken as the test of each variety. The rows were five feet apart, and the plants three and one-half feet apart in the row. Each plant was tied to a stake to keep the vines in place. A small black flea beetle was very troublesome while the plants were young. The following table will point out the comparative results; the headings of the columns will explain themselves.

REMARKS.		71.8 108. Early but rough. 181.8 Good. Early. 101.75.6 Inferior Quality.	89.3 Baoly Mixed. 59.9 U. 91. 93.9 93.9	74.2 Large, Smooth and Solid. 70.7 76.5 56.5 Smooth and Solid. 42.8 59.7 58.6 79.0	78.3 42.9 Small, Inferior. 67.3 68.3 40.9 93.6	9 8.4 9 8.4 10 119-6 Smooth and Uniform. 10 11.7 Smooth, Round and Uniform. 1 92.8 8 8.7 1 113.7	120.4 Largest, 1.2 ib. 96.2
Total Weight aword Ltuit Grown.	Lbs.				26.05 24.05 25.05	80.4 1119.6 111.7 99.5 84.77	128.7 96.2
Total Weigh's Rotten Fruits,	Lbs.		5.00 5.00 5.00 5.00 5.00		22. 25. 25. 25. 25. 25. 25. 25. 25. 25.	010 5-00 0000404	16.9
Weight Green Part left on Vines,	Lbs			26.0 16.7 11.0 12.0 24.0		25.00 20.00	40.0 25.0 19.0
Average Weight Ripe Fruits.	Oz.	4 00 00 00 00 00 00 00 00 00 00 00 00 00					
Total Weight.	Lbs.	55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5.4 55.5 55					_
Yield from Sept.	Lbs.	83.83.83.83 8.63.83.83 8.63.83.83			0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		
Yield from Aug. I. Igth to Sept. I.	Lbs.			28.27.69.83 1.82.7.69.83 1.83.7.69.72			
Yield of Ripe Fruit to Aug- ust 15th,	Lbs	97.50.00 98.18.00 98.18.19	24.1 1.4 16.6	10 31 31 41 7-00 10 22 10 20 1-00	1.07.00.44.68.5 4.25.05.00.44.68.5	18.7 15.3 11.4 29.6	24.23 24.73
ate of First Ripe Finit.	D	July 30 27 28 28 30 87 87			388555B	August 27 July 30	Angust 13 July 27 30
							4.0
SE¢DSMAN.		Landreth Landreth Landreth Landreth Landreth Landreth	Usardinal   Landreth   Landreth	Vingston's Sons. Vingston's Sons. Vingston's Sons. ukirk unkirk unkirk unkirk Seed Co	24 'lanada Victor	1s. 1s. S Stokes. C Stokes.	Dreer U. S. Dep't. Ferry & Co

Remarks.		Inferior quality. Large, uniform, smooth)	Rough and inferior.	108.3 144.0 146.7 132.5 Largest 1.2 lb. 129.3 Soft and seedy.
Total Weight. aword tiura	Lbs.	106 0 86.3 111.7 123.3 147.0	109.25 109.25 109.25 109.25 109.25	108.3 144.0 146.7 132.5 154.7 136.8 136.8
Lotal Weight of Rotten Fruit.	Lb3.	11.4 16.9 1.8 19.8	1.00 00 1.00 00 00 00 00 00 00 00 00 00 00 00 00	3.01 3.00 0.10 0.10 0.10
Weight of Green Pruit Left on Vines.	Lbs.	23.00 38.00 30.00	28.22.23.8 2000000	91.05.01.05.00.00.00.00.00.00.00.00.00.00.00.00.
Average Weight sints.	Oz.	0.00 to 0.00 t	4.4.6.4.4.4.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.4.6.6.6.4.4.4.4.6.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.4.4.4.6.4	0.000000000000000000000000000000000000
Total Weight Ripe Fruits.	Lbs.	93.0 65.3 86.7 85.3	388842885 00008=	7.88.27.70
Yiele from Sep- tember 1 to September 26.	Lbs.	35.50 35.00	222222	45 25 25 25 25 25 25 25 25 25 25 25 25 25
Yield from Au-	Lbs.	25.7 42.7 24.6 49.3	2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	86 4 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Yield of Ripe Fruit 10 Au- gust 15.	Lbs.	24. 16.9 18.0 83.8 83.8 7.8	26.8 26.9 26.9 24.0 19.9 18.0	82.82.83 8.83.93 8.83.03 8.03.03 8.03.03 8.03.03 8.03.03 8.03.03 8.03.03 8.03 8
te of First Rips	D <sup>S</sup>	July 30 30 30 27 27	August 30 July 27	30 27 August 1 July 18 August 3
Seedsta n.		L. Childs. ndreth. ndreth. ndreth.	ndreth ndreth ndreth ndreth ndreth ndreth ndreth ad. W. Alwood	W. Alwood. thon Casselbe ry. tion tton tton
VARIETY.		46 Golden Fig 47 Ten Ten Tomato 48 Chemine Apple 60 Baltimore Prize Taker	51 Adhartic Pr 20, 20, 20, 20, 20, 20, 20, 20, 20, 20,	68 (1938 No. 3 189 (1758 No. 4 189 (1758 No. 4 60 (Lemon Blush 18) (Seedling No. 1 18) Seedling No. 2 44) (Seedling No. 2 64) (Seedling No. 4

# Water Melon.

Fifteen varieties were used. The old standards are too well known to require special mention. Two new varieties not so commonly grown, worthy of mention are: Fordhook Early, Burpee, very early, round in form, a medium green, striped; flesh, bright red with white seed, good size and quality. Kentucky Wonder, N. B. G. & Co., large, oblong in form, skin medium green, flesh red, seeds brown, good quality.

#### Miscellaneous.

Numerous other kinds of vegetables were grown, as Parsnips, Brussels—Sprouts, Borocoli, Turnips, Carrots, Collards, Cress, Endive, Leek, Mustard, Okra, Parsley, Winter Radishes, Ruta-Bagas, Spinach, Rhubarb, etc. Among these there are comparatively few new introductions; therefore, we do not deem it necessary to give any detailed account of each.

# Donations to the Horticultural Department, 1894.

Names.	Pkt's Flow. Seed	Pkt's Veg. Seed
J. A. Everitt H. W. Buckbee W. Atlee Burpee Prof. W. B. Alwood	31 9	19
Jas. Vick & Sons	5 5	. 4 S
L. H. Reid Prof. L. H. Bailey		1 4
Jas. M. Thornburn & Co.  A. W. Livingston's Sons.  H. A. Dreer.		3 5
Peter Henderson & Co U. S. Department Agriculture	······	$\begin{array}{c} 12 \\ 22 \end{array}$

# Remarks.

1. The Table of Contents, page 137, refers you to the various kinds of vegetables treated.

2. If any one desires information in regard to any variety not mentioned in this Bulletin, we will be pleased to aid them, if possible.

3. Our purpose at present is to test all the new introductions and to report upon their comparative merits, that we may aid in

the selection of seeds.

4. The conclusions in tests are based upon both our own experi ments and those of other noted and trusted gardeners.

F. WM. RANE.







